

PENDING CLAIMS

The following is a complete list of claims currently pending in the application. Please cancel claims 20-22, 27, 30-31, 34 and 39. Please amend claims 26, 36-38, and 40 as shown below.

1-2. (Cancelled)

3. (Previously amended) A method for making a transistor containing a gate dielectric structure, comprising:

providing a gate conductor;

providing a channel; and

providing, between the gate conductor and the channel, an oxide layer of the gate dielectric structure by an in-situ steam generation process, wherein the transistor is a thin film transistor.

4. (Cancelled)

5. (Previously amended) The method of claim 3, wherein the in-situ steam generation process is performed at a temperature ranging from about 600 to about 900 degrees Celsius.

6. (Previously amended) The method of claim 3, wherein the in-situ steam generation process is performed at a pressure ranging from about 100 millitorr to about 760 torr.

7. (Previously amended) The method of claim 3, wherein the in-situ steam generation process is performed for a time sufficient to deposit an oxide thickness of about 10 to about 200 angstroms.

8. (Previously amended) The method of claim 28, further including annealing the oxide layer in a nitric oxide atmosphere.

9. (Previously amended) A method for making a SONOS device, comprising:

providing a channel region;

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providing a first oxide layer on the channel region by an in-situ steam generation process;
providing a nitride layer on the first oxide layer; and
providing a second oxide layer on the nitride layer, wherein the device is a SONOS device.

10-11. (Cancelled)

12. (Original) The method of claim 9, wherein the in-situ steam generation process is performed at a temperature ranging from about 750 to about 1050 degrees Celsius.

13. (Original) The method of claim 9, wherein the in-situ steam generation process is performed at a pressure ranging from about 100 millitorr to about 760 torr.

14. (Original) The method of claim 9, wherein the in-situ steam generation process is performed for a time sufficient to deposit an oxide thickness of about 10 to about 200 angstroms.

15. (Original) The method of claim 9, further including annealing the oxide layer in a nitric oxide atmosphere.

16-22. (Cancelled)

23. (Previously amended) A thin film transistor containing a gate dielectric structure made by a method comprising:

providing a gate conductor;

providing a channel region; and

providing, between the gate conductor and the channel region, an oxide layer of the gate dielectric structure on the channel region by an in-situ steam generation process, wherein the transistor is a thin film transistor.

24. (Previously amended) A SONOS semiconductor device made by a method comprising:

providing a channel region;

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providing a first oxide layer on the channel region by an in-situ steam generation process;
providing a nitride layer on the first oxide layer; and
providing a second oxide layer on the nitride layer wherein the device is a SONOS semiconductor device.

25. (Previously amended) An integrated circuit containing a thin film transistor with a gate dielectric structure made by a method comprising:

providing a gate conductor;
providing a channel; and
providing, between the gate conductor and the channel, an oxide layer of the gate dielectric structure by an in-situ steam generation process wherein the transistor is a thin film transistor.

26. (Currently amended) An integrated circuit containing a SONOS semiconductor device made by a method comprising:

providing a ~~silicon wafer or silicon~~ polysilicon layer;
providing a first oxide layer on the ~~silicon wafer or silicon~~ polysilicon layer by an in-situ steam generation process;
providing a nitride layer on the first oxide layer; and
providing a second oxide layer on the nitride layer wherein the device is a SONOS semiconductor device.

27. (Cancelled)

28. (Previously added) The method of claim 3, wherein the transistor is a SONOS transistor.

29. (Previously added) The method of claim 3, wherein the transistor comprises a floating gate.

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30-31. (Cancelled)

32. (Previously added) The transistor of claim 23, wherein the transistor comprises a floating gate.

33. (Previously added) The integrated circuit of claim 25, wherein the transistor comprises a floating gate.

34-35. (Cancelled)

36. (Currently amended) A method for making a SONOS device, comprising:

providing a polysilicon channel region;

providing a first oxide layer in contact with the polysilicon channel region by an in-situ steam generation process;

providing a nitride layer in contact with the first oxide layer; and

providing a second oxide layer in contact with the nitride layer.

37. (Currently amended) A SONOS semiconductor device made by a method comprising:

providing a polysilicon channel region;

providing a first oxide layer in contact with the polysilicon channel region by an in-situ steam generation process;

providing a nitride layer in contact with the first oxide layer; and

providing a second oxide layer in contact with the nitride layer.

38. (Currently amended) An integrated circuit containing a SONOS semiconductor device made by a method comprising:

providing a ~~silicon wafer or silicon~~ polysilicon layer;

providing a first oxide layer in contact with the ~~silicon wafer or silicon~~ polysilicon layer by an in-situ steam generation process;

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providing a nitride layer in contact with the first oxide layer; and
providing a second oxide layer in contact with the nitride layer, wherein the device is a
SONOS semiconductor device.

39. (Cancelled)

40. (Currently amended) A method for making a gate dielectric structure for a thin film
transistor ~~or a SONOS device~~, comprising:

- providing a gate conductor;
- providing a channel region; and
- providing, between the gate conductor and the channel region and in contact with the
channel region, an oxide layer of a gate dielectric structure by an in-situ steam generation process
performed at a temperature ranging from about 600 to about 1050 degrees Celsius, a pressure
ranging from about 100 millitorr to about 760 torr, and for a time sufficient to deposit an oxide
thickness of about 10 to about 200 angstroms, wherein the gate dielectric structure is for a thin
film transistor ~~or a SONOS device~~.

41. (Previously amended) A thin film transistor containing a gate dielectric structure made by a
method comprising:

- providing a gate conductor;
- providing a channel region; and
- providing, between the gate conductor and the channel region and in contact with the
channel region, an oxide layer of the gate dielectric structure on the channel region by an in-situ
steam generation process, wherein the transistor is a thin film transistor.

42. (Previously amended) An integrated circuit containing a thin film transistor with a gate
dielectric structure made by a method comprising:

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providing a gate conductor;
providing a channel; and
providing, between the gate conductor and the channel and in contact with the channel, an oxide layer of the gate dielectric structure by an in-situ steam generation process, wherein the transistor is a thin film transistor.

CLAIM AMENDMENTS

Claims 26, 36-38, and 40 are amended in this response. None of these amendments introduces new matter.

Claim 26 has been amended to recite an integrated circuit containing a SONOS semiconductor device made by a method comprising providing a polysilicon layer; providing a first oxide layer on the polysilicon layer by an in-situ steam generation process; providing a nitride layer on the first oxide layer; and providing a second oxide layer on the nitride layer wherein the device is a SONOS semiconductor device. The amendments to claim 36-38 similarly specify that the silicon layer or channel region upon which an oxide layer is grown by an in-situ steam generation process is of polysilicon.

Support for these amendments is found in the specification at paragraphs 20 and 37, *inter alia*.

Claim 40 recites a method for making a gate dielectric structure for a thin film transistor, comprising providing a gate conductor; providing a channel region; and providing, between the gate conductor and the channel region and in contact with the channel region, an oxide layer of a gate dielectric structure by an in-situ steam generation process performed at a temperature ranging from about 600 to about 1050 degrees Celsius, a pressure ranging from about 100 millitorr to about 760 torr, and for a time sufficient to deposit an oxide thickness of about 10 to about 200 angstroms, wherein the gate dielectric structure is for a thin film transistor. The prior version of the claim recited a method for making a gate dielectric structure for a thin film transistor *or a SONOS device*. Clearly, this amendment does not add new matter.